Guide to Surveillance, Reporting and Control

(2nd Edition)

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Introduction

Purpose of the *Guide to Surveillance, Reporting and Control*

Infectious diseases are a continuing threat to the public's health. They cause illness, suffering, and death, and they place an enormous financial burden on society. Although some infectious diseases have been controlled by modern advances, new diseases are constantly emerging. State public health officials rely on local boards of health (LBOH), health care providers, laboratories, and other public health personnel to report the occurrence of reportable diseases. Without such data, trends cannot be accurately monitored, unusual occurrences of diseases (such as outbreaks) cannot be detected and appropriately addressed, and the effectiveness of control and prevention activities cannot be easily evaluated.

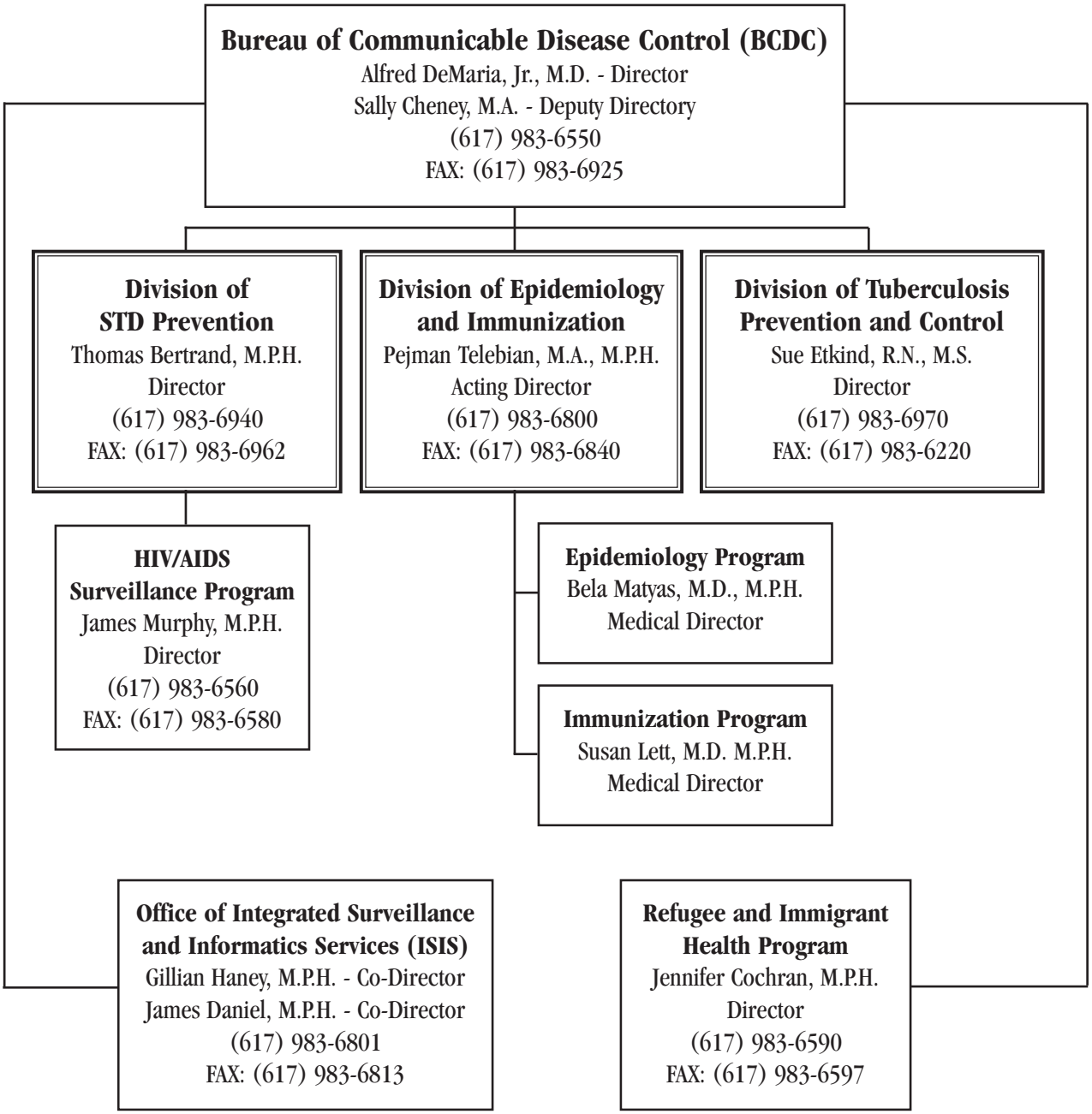
The Massachusetts Department of Public Health (MDPH), Bureau of Communicable Disease Control (BCDC), Office of Integrated Surveillance and Informatics Services (ISIS) places strong emphasis on improving infectious disease surveillance and response. This reference manual is part of the MDPH focus on providing more training and technical assistance to LBOH. The purpose of this manual is to guide LBOH through specific surveillance and reporting responsibilities for the diseases currently reportable to the MDPH (see list at the end of this *Introduction*).

This manual is arranged alphabetically by disease. Section 4 of this *Introduction (Organization of Each Disease Chapter)* describes the content of each chapter. While this manual is targeted to LBOH and health department personnel, other health care professionals can also use the information to enhance their understanding of local public health surveillance and reporting responsibilities and how they can collaborate and play a role in strengthening timely and complete reporting.

Organization of the MDPH Bureau of Communicable Disease Control

The MDPH Bureau of Communicable Disease Control (BCDC) is housed at the MDPH State Laboratory Institute (SLI) in Jamaica Plain. The Division of Epidemiology and Immunization is one of five components of the BCDC. The BCDC also includes the Division of TB Prevention and Control, Division of STD Prevention (which includes the HIV/AIDS Surveillance Program), the Refugee and Immigrant Health Program, and ISIS, which works closely with all programs within the BCDC. The MDPH Division of Epidemiology and Immunization is further subdivided into the Epidemiology Program and the Immunization Program (see *Figure 1: Massachusetts Department of Public Health [MDPH], Bureau of Communicable Disease Control [BCDC] Organization*).

Figure 1: Massachusetts Department of Public Health (MDPH), Bureau of Communicable Disease Control (BCDC) Organization



The Massachusetts Reportable Disease Surveillance System

What is Surveillance?

Disease surveillance is the regular collection, monitoring, and analysis of data relevant for control and prevention. The data may be used to define baseline levels of disease. By knowing the baseline, one may identify unusual occurrences of disease. Ultimately, the purposes of infectious disease surveillance are: 1) to use information to help interrupt transmission of disease to susceptible persons; and 2) to reduce morbidity and mortality through:

- Timely reporting,
- Identification and investigation of outbreaks, and
- Interpretation of investigative data and dissemination of findings.

In July 2004, a new organization was formed within the BCDC: the Office of Integrated Surveillance and Informatics Services (ISIS). ISIS was established with the primary goal of streamlining and enhancing surveillance and IT activities among the four Divisions and Programs that comprise the BCDC. ISIS has begun to merge surveillance and information technology (IT) initiatives within the BCDC in a phased approach. As a first step, ISIS has assumed oversight of the relevant surveillance and IT projects for the Division of Epidemiology and Immunization and the Division of Tuberculosis Prevention and Control. The Divisions and Programs will maintain epidemiologic analytic capacity and programmatic direction related to surveillance.

In general, ISIS will assume responsibility for the following activities:

- Managing new and existing surveillance and IT initiatives;
- Providing a single point of contact for external reporting sources including local health agencies, laboratories, hospitals, and providers;
- Evaluating surveillance and IT systems and relevant protocols;
- Coordinating data exchange and managing surveillance data collection efforts;
- Developing and implementing data collection and IT standards;
- Providing surveillance-related IT software support for the Divisions and Programs, including support of existing projects;
- Overseeing surveillance and relevant IT-related contracts;
- Providing oversight related to confidentiality, privacy, HIPAA, and legal and freedom of information requests; and
- Overseeing and revising Reportable Diseases, Surveillance and Isolation and Quarantine Requirements (*105 CMR 300.000*).

Surveillance is often categorized into two types: "active surveillance" and "passive surveillance." Traditional reporting of diseases by health care providers and laboratories is considered passive surveillance. This means that the recipient of the information waits for initial data on a case to be submitted. This usually leads to collection of additional information and implementation of follow-up activities. A LBOH receiving a report of invasive *Neisseria meningitidis* infection from a health care provider or facility is an example of passive surveillance.

A sub-category of passive surveillance is "enhanced passive surveillance," in which the organization receiving data works closely with health care providers and laboratories that are most likely to report a particular disease or group of diseases, and sets up systems to increase timeliness and completeness of reporting. Enhanced passive surveillance often requires phone calls and other follow-up activities with reporting sources and involves more work than traditional passive surveillance.

In active surveillance, the organization receiving information takes *direct* action in collecting this information. This may occur through direct review of medical records, laboratory records, or screening of high-risk populations. An example of active surveillance occurred in Massachusetts in the late 1990s when an increased incidence of hepatitis A was observed in a particular population. In order to gain a more complete picture of the situation, certain health care facilities serving this population worked with MDPH to actively locate and review all medical records with information suggesting recent infection with hepatitis A virus. A more comprehensive picture of the outbreak was gained from this information, and this led to an education and vaccination campaign.

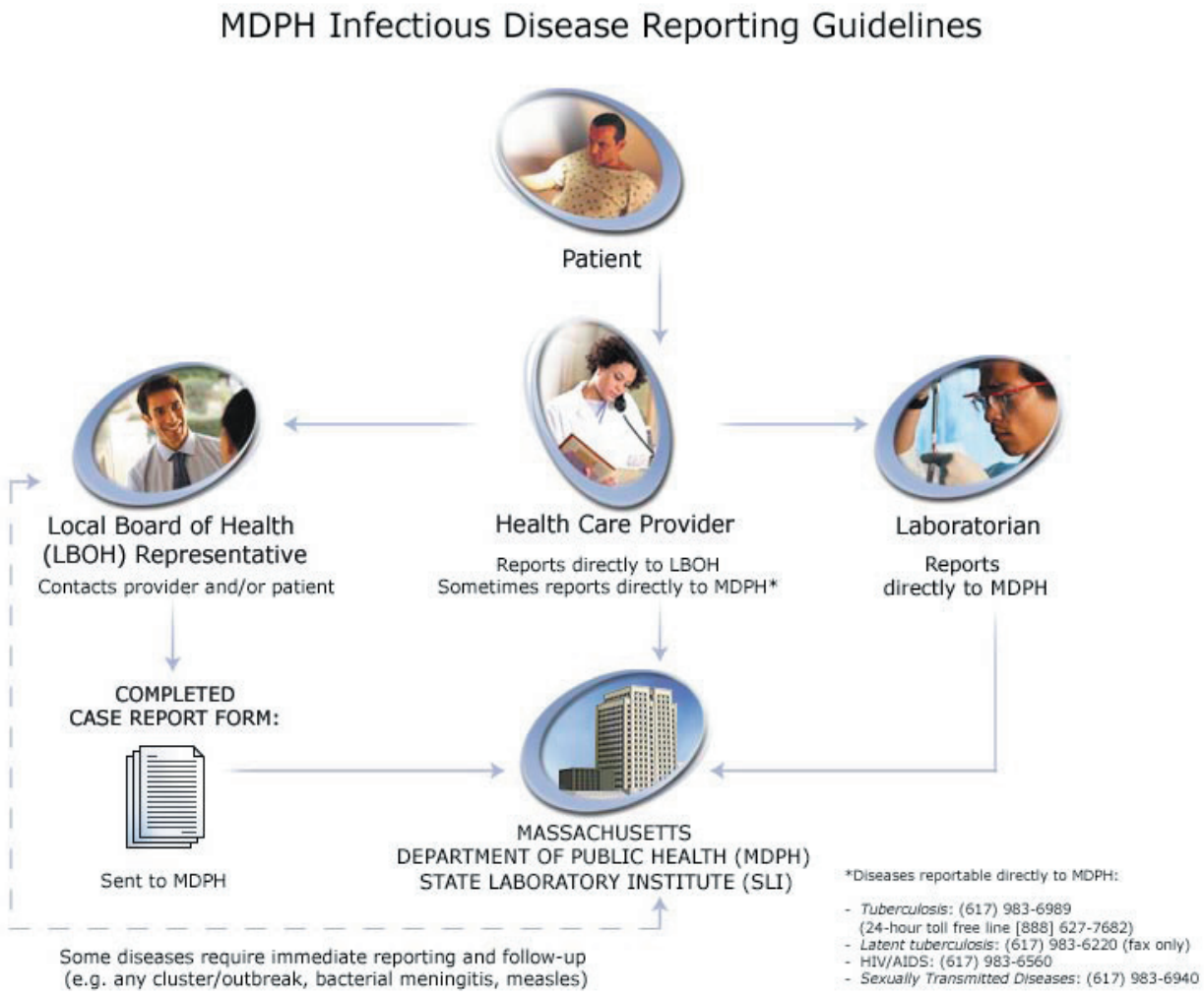
Legal Basis

In Massachusetts, reporting of communicable diseases is required under Massachusetts General Laws, Chapter 111, Sections 3, 6, 7, 109, 110, 111 and 112, and Chapter 111D, Section 6. These laws are implemented by regulation under Chapter 105, Code of Massachusetts Regulations (CMR), Section 300 *et seq*: Reportable Diseases, Surveillance, and Isolation and Quarantine Requirements. The purpose of these regulations is "to list those diseases declared dangerous by the Massachusetts Department of Public Health, and to establish reporting, isolation and quarantine requirements. This is intended for use by local boards of health, hospitals, physicians, educational and recreational program health officials, food industry officials, and the public." These regulations are updated periodically and were updated and revised in 2003, 2004, and 2005.

Infectious diseases designated as dangerous to the public health must be reported directly to the LBOH of the city or town in which the diagnosis is made. The only exceptions to this are sexually transmitted diseases, tuberculosis, and HIV/AIDS, which are reported directly to the MDPH (see *Figure 2: Massachusetts Reportable Disease Surveillance System*). LBOH or their designees are authorized to accept, investigate, and submit reportable disease case information to the BCDC. Typically, this occurs in one of three ways: 1) a phone call is made to report an immediately reportable disease, such as hepatitis A or measles, by calling (617) 983-6800 or (888) 658-2850; 2) a completed case report form is stamped "Confidential" and mailed to ISIS; or 3) a copy of a laboratory result is faxed to the ISIS confidential fax at (617) 983-6813, usually in connection with an immediately reportable disease.

Note: Specific information about what to report and when and where to report it is provided in each individual chapter.

Summary information on nationally notifiable diseases is submitted to the CDC on a weekly basis (without personal identifiers). This information is used to track national and regional disease trends. Lists of diseases currently reportable to the BCDC and to LBOH (by health care providers and by laboratories) are provided at the end of this *Introduction*. These lists may be updated every year or two. To inquire about updates, please call ISIS at (617) 983-6801 or check the MDPH website at www.mass.gov/dph.



Case Investigation and Control: State Versus Local Role

The MDPH Division of Epidemiology and Immunization collaborates with LBOH in the investigation of communicable disease cases and in the implementation of appropriate control and prevention measures. The guidelines in this manual, as well as in other referenced material, form the basis for LBOH communicable disease reporting, investigation, and control. Due to the generally low prevalence of most vaccine-preventable diseases and national elimination goals established for some of these diseases, rapid, intensive, and uniform follow-up is required for every case. For this reason, MDPH epidemiologists generally take the primary role in vaccine-preventable disease case investigation and outbreak control, including filling out the official case report form. For other infectious diseases, the LBOH takes the primary role in investigating individual cases. Note that the MDPH has "coordinate powers" with LBOH and may initiate an investigation. When a LBOH is unavailable, the MDPH may receive reports directly from health care providers.

When clusters of illness, potential bioterrorist agents, emerging infections, or other serious threats to public health are identified, the MDPH will provide technical assistance to LBOH. This assistance will range from serving in a consulting capacity to direct management of the investigation, implementation of control and prevention measures, and follow-up activities. In some situations, the MDPH may request federal technical assistance from the CDC.

Note: Requests for federal technical assistance must be made by the MDPH.

When an institution, such as a health care facility or a school, is the site of possible transmission of infection, the infection control staff of the facility or the school nurse is typically actively involved in the investigation and in the application of control and prevention measures. Decisions about varying the control measures are normally made collectively by the MDPH, the LBOH, and the infection control staff (or equivalent) in the affected institution. However, the MDPH and the LBOH, working together, have ultimate authority.

Timeliness of Reporting

Cases of reportable infectious diseases are reported to ISIS by the LBOH using an official case report form, which is usually mailed. (The exceptions are the diseases that are reported directly to MDPH by health care providers.) Certain diseases should be immediately reported by phone to the MDPH Division of Epidemiology and Immunization, at (617) 983-6800 or (888) 658-2850, when a suspect or confirmed case is identified. See each disease chapter for details. Diseases that require immediate reporting should always be prioritized above other case investigations. In addition, any disease that involves a cluster or a suspected foodborne outbreak should also be reported immediately to the MDPH Division of Epidemiology and Immunization, by phone at (617) 983-6800 or (888) 658-2850, and should be prioritized accordingly. Later, the LBOH can follow up with an official case report form to ISIS. All diseases that are not categorized as "immediate" should be reported and investigated in a timely manner, and a completed case report form with appropriate laboratory test result documentation (if applicable for the disease) should be submitted.

Note: Reports of illness received for residents of other cities/towns should be forwarded either to the LBOH of that city/town or to ISIS (which will notify the appropriate LBOH).

Timeliness of reporting is extremely important. Failure to report in a timely manner can have dire consequences. For example, if a local health authority retains its reports of *Salmonella* and only submits them periodically, a potential outbreak occurring across city/town limits may go unnoted and uncontrolled.

Note: Specific information about what to report and when and where to report it is provided in each individual chapter.

The MDPH Division of Epidemiology and Immunization has an epidemiologist on-call during normal business hours at (617) 983-6800 or (888) 658-2850 to answer questions about *case investigation and control measures*. ISIS is available during normal business hours at (617) 983-6801 for questions about *reporting requirements.* An epidemiologist is also available via beeper during non-work hours and weekends for emergency situations (e.g., if you receive several complaints and are concerned about a potential foodborne illness outbreak or if you suspect a bioterrorist incident) at (617) 983-6800 or (888) 658-2850. All calls are returned promptly.

Some examples of top priorities for reporting and follow-up include:

- Clusters of illness;
- Diseases that require prompt administration of agents to prevent further spread and/or to reduce morbidity and mortality (e.g., rabies, hepatitis A, pertussis, or meningococcal infection);
- Diseases with high mortality rates (e.g., eastern equine encephalitis);
- Suspect bioterrorist agents (e.g., anthrax or smallpox);
- Disease that is unusual in the infected individual's demographic group or geographic region; or
- Enteric illness in a food handler or a household contact of a food handler.

Note: To help LBOH distinguish diseases that pose a more serious pubic health threat, certain chapters have been flagged. These disease chapters have a box with the notation "Report Immediately" at the top of the first page. Immediate reports are usually made by phone, by calling the MDPH Division of Epidemiology and Immunization at (617) 983-6800 or (888) 658-2850. You may also contact the Division if you are unsure about which investigations to do first or if you need technical assistance.

Completion of Case Report Forms

Important points about filling out a MDPH case report form:

- **PLEASE PRINT LEGIBLY.**
- Case reports forms (CRFs) may be faxed to ISIS at (617) 983-6813 (can be faxed any time of day or night) or mailed to: Office of Integrated Surveillance and Informatics Services (ISIS), MDPH State Laboratory Institute (SLI), 305 South Street, 5th floor, Jamaica Plain, MA 02130. Please fax or mail CRFs as soon as possible after you complete them; do not batch reports.
- **Fill in all blank spaces when submitting a final (CRF).** If you don't have information, check off the "Unknown" box or put "n/a" in the space for information. If a response is left completely blank, it's impossible to know if the information is not available or if there was an oversight in filling out the form. There is one exception—do not fill out the sections labeled "for state health department use."
- Remember that DATES are important! Wherever possible, please fill in all dates (e.g., date investigation started, date of onset, etc).
- Zip codes are also very important! Please include zip codes on all CRFs.
- Always include the name, agency, phone, and fax of the person completing the CRF, and the date completed.
- Include copies of relevant laboratory reports with the CRF.
- If you have questions about filling out the CRF, call a MDPH epidemiologist at (617) 983-6800 or (888) 658-2850.

Confidentiality

Maintaining confidentiality of health information is a legal requirement. The information that public health officials collect is often of a personal nature and individually identifying. Protecting an individual's right to privacy is critical to success and cooperation in disease investigation.

All staff, including clerical and administrative staff, interns, and LBOH members who have access to or who come into contact with individually identifying information on a case (as part of their job or by accident) must be familiar with and mindful of the basic tenets of protecting confidentiality. Individuals who fall into the category of "need to know" should include only those who are directly involved in interviewing a case or contacts and/or those directly involved in follow-up activities to control the spread of the disease. This would normally not include general administrators, town officials, elected officials, and others involved in town government who are not directly providing disease control services. In addition, individuals assisting in general education to the public have no need to know personally identifying information about a case.

If you are unsure whether it is appropriate to release information, do not release it! Check with a supervisor, the municipal attorney or legal advisor, or contact ISIS at (617) 983-6801 for advice. Make sure information is released only to people who are authorized to receive it. Do not be pressured into a hasty decision. Do not even confirm an individual case unless you are certain that it is appropriate to release that information. If you are unsure who is requesting information, obtain confirmation of the requestor's identity before releasing information (i.e., a signed consent form with documented identification such as a driver's license; for guardians, documentation of guardianship). Inappropriate release of data may pose a liability threat to your agency and/or municipality and could endanger affected individuals.

Note: We strongly encourage you to develop a written confidentiality policy and standard confidentiality agreement form for all LBOH staff who are involved in communicable disease investigation and control or who have access to case records. We also recommend that all staff receive training with regard to your confidentiality policy. To obtain further information, call ISIS at (617) 983-6801.

While it is essential to protect the confidentiality of health information, it is also important to recognize that it is appropriate to share information between municipalities, with health care providers, and at times, with the MDPH during the course of public health investigations and control activities. However, even in these instances, a "need to know" standard applies. The BCDC will only release individual case information to the responsible representative of a local health authority involved in an investigation of the case, the individual who is the subject of the investigation, or the individual's guardian or designee (with written authorization).

The MDPH strongly encourages municipalities to acquire a dedicated fax line and machine for the use of individuals involved in communicable disease reporting, investigation, and control. This machine should be located in a secured area where disease control staff work and should not be accessible to the general public. Communicable disease control personnel's use of a fax machine shared by many personnel in town government presents a heightened risk for breach of confidentiality. Files containing individually identifiable information should be stored in a locked file cabinet or a locked room and made available only to those with a "need to know."

Important Points Regarding Confidentiality:

- Everyone with access to case information is required to maintain confidentiality, review confidentiality procedures, and complete confidentiality training.
- Confidential information may be released only to those who "need to know."
- Be certain of the identity of the person to whom you release confidential information. Insist on confirmation of identity (e.g., driver's license or other government or organization-issued identification).
- If communicating over the telephone, be sure you know who you are talking with, and if you are not sure, call back on an institutional, "official" line to ensure that you are speaking with the appropriate individual.
- Maintain confidentiality during reporting processes. When mailing case report forms to the MDPH, stamp envelopes "CONFIDENTIAL." If reporting by fax, be certain that the receiving number is a confidential fax (MDPH confidential fax numbers are provided in each chapter of this manual). When receiving information by fax at your office, confidentiality must be maintained.
- Personally identifying information from case report forms and other forms may not be released without the individual's signed consent, except to those directly involved in case investigation, control, and prevention who have a "need to know."

Remember that the type(s) of information that is personally identifying can change according to the situation. For example, demographic information such as age, race, sex, or zip code could be used to identify individuals if there were only a small number of cases in a certain time or place or during a particular investigation.

Local and state public health authorities have investigated cases of infectious disease and collected sensitive information for more than 100 years. Our disease control and prevention efforts are successful because we uphold the public's trust by maintaining strict confidentiality.

HIPAA

The Health Insurance Portability and Accountability Act (HIPAA) Privacy Rule, which went into effect on April 14, 2003, raises many questions and is having some unintended consequences with respect to public health reporting. HIPAA is designed to increase the efficiency of the health care system and to enhance the privacy and security of protected health information (PHI). While HIPAA has raised consciousness about PHI, it was not intended to impact public health entities or to interfere with public health activities. A memorandum, issued by MDPH in 2003, explaining the HIPAA Privacy Rule requirements and clarifying public health reporting laws and regulations can be found at the end of this *Introduction*; the memorandum may be faxed to health care providers if necessary.

The public health activities of LBOH related to reporting, surveillance, and disease control are exempt from the HIPAA Privacy Rule, although direct and clinical services may be covered. As a public health authority, MDPH and LBOH are permitted to collect or receive PHI from health care providers for public health surveillance, investigation, and interventions. MDPH and LBOH are also permitted to disclose PHI for public health purposes, as required by law. If LBOH encounter difficulties with providers who are not aware of the disease reporting or disease surveillance and investigation responsibilities of LBOH, they should contact ISIS at (617) 983-6801 for advice.

Reporting by Clinicians

Throughout the Commonwealth, reporting of diseases by clinicians is improving but remains inconsistent. Clinicians are more likely to report diseases with high mortality or diseases spotlighted in local and national media. Some strategies to increase reporting by clinicians include: focused education on the importance of reporting and appropriate mechanisms for reporting; identification of professional or support staff who work with clinicians and who are able to take on the responsibility for reporting of clinician-diagnosed reportable disease; and prioritization of reportable diseases that pose a more serious risk to public health.

Note: LBOH having difficulty obtaining information from clinicians should contact the MDPH Division of Epidemiology and Immunization at (617) 983-6800 or (888) 658-2850 for assistance. Also, sample letters outlining the roles and responsibilities of the LBOH for use with health care providers and patients are available from the MDPH Division of Epidemiology and Immunization.

Health care providers do not always inform patients that a disease is reportable to local or state health departments. This may lead to distress for a patient who is contacted for a case investigation. Health care provider education on this issue is a good strategy for LBOH. In addition, LBOH should know when test results and diagnoses are communicated to a patient. For diseases that do not require immediate treatment and for which the risk of transmission to others is minimal or nonexistent, a clinician may wait for a patient's next visit before discussing the diagnosis. LBOH should communicate with health care providers in their area about these potential situations to avoid contacting patients for case investigations before the patients are aware of their diagnoses. It is usually best to begin an investigation by contacting the reporting clinician.

The most important strategy for improving reporting by health care providers is to develop strong working relationships with providers in your jurisdiction through education, through provision of reports on public health activities and disease data, and by asking for their participation in timely public health initiatives such as immunization efforts, influenza pandemic planning, bioterrorist response, and/or surveillance for emerging infections.

Laboratory Reporting

Laboratory reports are often sent directly to ISIS from laboratories. (Massachusetts General Law [Chapter 111D, Section 6] authorizes the MDPH to collect information on evidence of infectious diseases from clinical laboratories.) This has led to more timely reporting of disease. ISIS sends these laboratory results to LBOH within 24 hours of receipt for follow-up. Some laboratories batch their test results and submit them periodically, potentially leading to delays in reporting and associated identification or confirmation of cases. ISIS is working to eliminate this through laboratory outreach and through the implementation of electronic laboratory reporting. As hospital and laboratory databases become more integrated, better demographic information will become available. ISIS currently attempts to gather additional information from laboratories when the patient information initially provided by the laboratory is too limited to allow LBOH follow-up.

Sentinel Surveillance and Reporting of Selected Diseases

In addition to passive, enhanced passive, and active surveillance, the MDPH has several "sentinel" surveillance projects. The primary purpose of sentinel surveillance is the early detection of disease, whether it is emergent or recurrent. It requires that the organization receiving data work closely with a select number of sites (e.g., health care providers, laboratories, or school nurses) to supplement standard reporting. Sentinel surveillance is particularly useful in providing warning of the arrival of a disease that is spreading. For diseases that are high in volume and not individually reportable, such as influenza, it can also provide estimates about the burden of disease among the general population. Sentinel surveillance and reporting may also be helpful when monitoring a disease that is newly introduced to a population, such as West Nile virus infection, or when providing information about a disease disproportionately affecting specific populations, such as varicella in schools.

Limitations of Data

Under-Reporting and Incomplete Data

Most surveillance systems rely on disease data reported by individual health care providers. Health conditions are not reported randomly. However, it is estimated that, depending on the disease, only 5-80% of cases that actually occur will be reported. For example, foodborne illness is often under reported because individuals with disease do not consult a health care provider, or a diagnosis of "gastrointestinal illness" is made and treated without diagnostic tests that might identify the particular pathogen. Reporting bias can distort interpretation of disease data; yet, even with incomplete information, it is often possible to detect key trends and/or sources of infection. For diseases that occur less frequently, the need for completeness becomes more important and each individual case must be treated as a significant event.

Changing Case Definitions

Different practitioners frequently use different case definitions for health problems. The more complex the disease syndrome, the greater the difficulty in reaching consensus on a case definition. Moreover, with newly emerging diseases and as understanding progresses, case definitions are frequently adjusted to allow greater accuracy. Also, as new diagnostic tests are developed, case definitions sometimes change to incorporate these tests. Case definitions establish uniform criteria for disease reporting and are not definitive for diagnosis.

Bioterrorism

Bioterrorism is the intentional use of disease agents to create fear, to disrupt society, or to cause injuries and/or death. The use of biologic agents by terrorists may involve acts that are announced or otherwise immediately recognized. Alternatively—and considered to be more likely—a bioterrorist event could be the unannounced introduction of a biologic agent into the population that could take days to weeks before illness becomes apparent.

Because some diseases caused by bioterrorism may initially resemble common infectious diseases, the detection of a bioterrorist event could be difficult. LBOH should immediately notify the epidemiologist on-call at the MDPH Division of Epidemiology and Immunization, at (617) 983-6800 or (888) 658-2850, if any of the following are noticed:

- A cluster of illness that is unexplained after preliminary investigation.
- One or more cases of disease in a community in which the disease does not normally occur.
- Illness in an unusual geographic distribution (e.g., patients all residing in one area, possibly downwind of a point-location) or illness in an unusual population (e.g., serious pneumonia among young adults).

The response to a bioterrorist event, or to any infectious disease emergency, must be led by local communities. Planning and communication are extremely important and will be most effective if a strong partnership among public health, first responders (e.g., fire departments), emergency management, law enforcement, and local hospitals has been developed in advance.

The MDPH Center for Emergency Preparedness (CEP) serves as the operational focal point for emergency preparedness efforts across the agency, including epidemiology and surveillance, radiation control, environmental health, and environmental epidemiology. CEP staff includes coordinators assigned to specific planning components including risk communication and public outreach, behavioral health, infectious disease surveillance, radiological and chemical threats, and planning for deployment of the Strategic National Stockpile. CEP works with several divisions within MDPH to facilitate training efforts, enhanced laboratory capacities, expanded surveillance activities and related programs. For more information about the CEP, please visit the MDPH website at www.mass.gov/dph.

Conclusion

The best surveillance lies in the collection of accurate and timely data, and in the careful and correct interpretation of the data. Interpretation should focus on elements that might lead to control and prevention of the condition. Investigators can use surveillance as a basis for appropriate public health actions. The results of such actions can be assessed for effectiveness.

Content of Each Disease Chapter

Section 1: About the Disease

This section is designed to give the reader appropriate background information to understand each disease. There are eight subsections (A–H) that include etiologic agent, clinical description, vectors and reservoirs, modes of transmission, incubation period, period of communicability or infectious period, epidemiology, and bioterrorist potential. Section 1 is meant to serve as a quick synopsis and not as a diagnosis or treatment reference. The two main sources of information used to develop Section 1 are the *Red Book: Report of the Committee on Infectious Diseases of the American Academy of Pediatrics* and the *Control of Communicable Diseases Manual*. If you need more detailed information than given in this section, please consult these sources (refer to the *References* section at the end of each chapter).

Section 2: Reporting Criteria and Laboratory Testing

This section contains two subsections (A and B). The first subsection lists the MDPH case definition for the disease; namely, the clinical and/or laboratory information that will lead a LBOH to report to the BCDC. Some diseases require laboratory confirmation for diagnosis, while others are based on clinical syndrome only. Note that this subsection lists the minimum criteria to report. A LBOH may have additional clinical or laboratory information that can be reported to the BCDC as well. The BCDC will use the information to categorize cases as suspect, probable, or confirmed.

The second subsection lists laboratory testing services that are offered at the SLI for human clinical specimens. Other testing services (such as food testing) are listed if applicable for the investigation and control of that particular disease.

Section 3: Reporting Responsibilities and Case Investigation

This section contains three subsections (A–C). The first subsection lists the purpose of surveillance and reporting for the disease. The second provides the legal requirements for laboratories and health care providers.

The third subsection outlines LBOH legal responsibilities for case investigation and reporting to MDPH. If a disease poses a more serious public health threat than others, the respective chapter heading is flagged "Report Immediately." This section also indicates which case report form should be used and provides information on how to complete the form. For some diseases that pose a more serious pubic health threat, the BCDC may have primary responsibility for case investigation, in collaboration with a LBOH. An official case report form may not be required in this situation. This is noted where applicable.

Section 4: Controlling Further Spread

This section outlines LBOH responsibilities for controlling and preventing further spread of the disease. Four subsections (A–D) include isolation and quarantine requirements, protection of contacts of cases, managing special situations, and preventive measures. Most of the chapters contain basic information on these topics. Further detailed information (e.g., identifying and investigating an outbreak) may be referenced in other documents and can be obtained by consulting with the BCDC. For some diseases that pose a more serious public health threat, the BCDC may take primary responsibility for controlling further spread, in collaboration with a LBOH. This is noted where applicable.

Please Note:

1. This manual is designed to give an overview of LBOH responsibility for surveillance, reporting, control, and prevention of the diseases reportable to MDPH. As experience has proven, case investigation can vary greatly from setting to setting, and it is impossible to address all the questions and situations that may arise. The MDPH Division of Epidemiology and Immunization is available at (617) 983-6800 or (888) 658-2850 to offer guidance and assistance as needed. ISIS is available at (617) 983-6801 for questions regarding case report forms and reporting requirements.
2. The terms "local board of health (LBOH)" and "local health department" have been used interchangeably.
3. "You" and "your" refers to the audience for which this manual is intended—namely, personnel of LBOH and local health departments.
4. All information in this manual must be considered in light of newer information available after publication. The three-ring binder format of this manual allows for inclusion of additional and updated material, as it becomes available.

Other Reference Materials
How to Obtain Them

There are numerous references to other documents throughout this manual. Most of these are available from the MDPH Division of Epidemiology and Immunization by calling (617) 983-6800 or (888) 658-2850. These include:

- *Regulation 105 CMR 300: Reportable Diseases, Surveillance, and Isolation and Quarantine Requirements.* One copy is provided with this manual, but these are updated periodically. The most recent version is posted on the MDPH web site at www.mass.gov/dph/cdc/epii/reportable/reportable.htm.
- *Control Guidelines for Long-Term Care Facilities.* Available on the MDPH website at www.mass.gov/dph/cdc/epii/ltcf/ltcf.htm.
- *Foodborne Illness Investigation and Control Reference Manual* (limited supply). Available on the MDPH website at www.mass.gov/dph/fpp/refman.htm.
- *Public Health Fact Sheets.* Available on the MDPH website at www.mass.gov/dph. Click on the "Publications and Statistics" link, and select the "Public Health Fact Sheets" section under "Communicable Disease Control."
- CDC's *Case Definitions for Infectious Conditions Under Public Health Surveillances.* Available on the CDC website at www.cdc.gov/epo/dphsi/casedef/case_definitions.htm.
- *Group A Strep and Varicella Control Guidelines.*

Information on how to obtain other references is listed below.

- *The Comprehensive School Health Manual*

  A copy can be purchased at the State House Book Store or can be ordered by mail. The address is: State House Book Store, State House, Room 116, Boston, MA 02133. For more information, call the State House Book Store at (617) 727-2834. LBOH can also contact their MDPH regional office to see if copies are available.

- *Regulation 105 CMR 590: Minimum Sanitation Standards For Food Service Establishments – Article X*

  Information on how to obtain CMR 590 and the federal Food Code is available by calling the MDPH Center for Environmental Health, Food Protection Program (FPP) at (617) 983-6712 or through the MDPH website at www.mass.gov/dph/fpp/fcobta.htm.

- *Massachusetts General Laws*

  A copy can be purchased at the State House Book Store or can be ordered by mail. The address is: State House Book Store, State House, Room 116, Boston, MA 02133. For more information, call the State House Book Store at (617) 727-2834. The laws can also be accessed through the General Court of the Commonwealth of Massachusetts website at www.mass.gov/legis/laws/mgl/mgllink.htm.

Contact Information

Bureau of Communicable Disease Control (BCDC)

Division of Epidemiology and Immunization	Telephone: (617) 983-6800 or(888) 658-2850 (day, night, and weekend) *Note: In potential emergency situations that may require immediate control measures to deter further transmission, please call immediately—do not wait for complete case information before you report.*	The Division maintains a 24/7 epidemiologist on-call system. The on-call epidemiologist is available during normal business hours for emergencies and to answer questions regarding case investigation and implementation of control measures. He/she is available at night and weekends for emergencies only.
Office of Integrated Surveillance and Informatics Services (ISIS)	Telephone: (617) 983-6801 Confidential Fax: (617) 983-6813 Mailing address for case report forms: MDPH Office of Integrated Surveillance and Informatics Services (ISIS), State Laboratory Institute (SLI), 305 South Street, 5th floor, Jamaica Plain, MA 02130	ISIS: Monday – Friday (normal business hours). Confidential fax is available 24/7. Please call ISIS at (617) 983-6801 during normal business hours to confirm receipt. Stamp all envelopes CONFIDENTIAL.
Division of STD Prevention	Telephone: (617) 983-6940	Staff is available during normal business hours to answer questions and for technical assistance regarding reporting or treatment guidelines.
Seroreactor line	Telephone: (617) 983-6954	Clinicians can call for help with interpreting syphilis serology results.
Division of TB Prevention and Control	Telephone: (617) 983-6970 Confidential TB case reporting line: 1-888-MASSMTB (627-7682) or (617) 983-6801.	Normal business hours. Available to clinicians 24/7.

Communicable Diseases Reportable in Massachusetts

Local Board of Health (LBOH) Reporting Timeline

Note: If these diseases are initially reported to MDPH, LBOH will be notified in a like timeframe.

REPORT AND INITIATE INVESTIGATION IMMEDIATELY!

This includes both suspect and confirmed cases.

Telephone: (617) 983-6800 or (888) 658-2850 Confidential Fax: (617) 983-6813

Any cluster/outbreak of illness (e.g., foodborne)
Anthrax (*Bacillus anthracis*)
Botulism (*Clostridium botulinum*)
Brucellosis (*Brucella* sp.)
Diphtheria (*Corynebacterium diphtheriae*)
Encephalitis
Haemophilus influenzae (invasive infection)
Hemolytic Uremic Syndrome
Hepatitis A (acute [IgM+])
Measles (Rubeolavirus)
Meningitis (Bacterial)
Meningococcal Disease (*Neisseria meningitidis*, invasive)
Plague (*Yersinia pestis*)
Poliomyelitis
Rabies (humans only)
Rubella (congenital and non-congenital)
Severe Acute Respiratory Syndrome (SARS)
Smallpox
Tetanus (*Clostridium tetani*)
Tularemia (*Francisella tularensis*)
Viral Hemorrhagic Fevers

Important Note: Enteric illness in a food handler should be reported to the LBOH where the cases resides and the LBOH where the case works.

INITIATE INVESTIGATION, COMPLETE & SUBMIT CASE REPORT FORM AS SOON AS POSSIBLE.

This may include both suspect and confirmed cases.

Amebiasis (*Entamoeba histolytica*)
Babesiosis (*Babesia microti*)
Campylobacter Enteritis (*Campylobacter* sp.)
Chickenpox (Varicella)
Cholera (*Vibrio cholerae* 01 or 0139)
Cryptosporidiosis (*Cryptosporidium parvum*)
Cyclospora (*Cyclospora cayetanensis*)
Dengue
E. coli 0157:H7
Eastern Equine Encephalitis (EEE)
Ehrlichiosis (*Ehrlichia canis, E. chaffeensis, E. equi, E. phagocytophila, E.* sp.)
Foodborne Poisonings (includes poisoning by ciguatera, scombrotoxin, mushroom toxin, tetrodotoxin, paralytic shellfish, and amnesic shellfish)
Giardiasis (*Giardia lamblia*)

Group A streptococcus (from normally sterile site)
Group B streptococcus (from normally sterile site)
Guillain-Barré Syndrome
Hansen's Disease (Leprosy)
Hantavirus
Hepatitis B
Hepatitis C (acute)
Hepatitis, other
Influenza
Legionellosis (*Legionella* sp.)
Leptospirosis (*Leptospira* sp.)
Listeriosis (*Listeria monocytogenes*)
Lyme Disease (*Borrelia burgdorferi*)
Malaria (*Plasmodium vivax, P. malariae, P. falciparum, P. ovale*)
Meningitis (viral)
Monkeypox or other Orthopox in humans
Mumps
Norovirus
Pertussis (*Bordetella pertussis*)
Prion disease (human)
Psittacosis (*Chlamydia psittaci*)
Q Fever
Rabies (animal)
Reye Syndrome
Rickettsialpox
Rheumatic Fever
Rocky Mountain Spotted Fever (*Rickettsia rickettsii*)
Salmonellosis–including typhoid (*Salmonella* sp.)
Shiga toxin-producing organisms
Shigellosis (*Shigella* sp.)
Streptococcus pneumoniae
Typhoid Fever
Toxic Shock Syndrome
Toxoplasmosis (*Toxoplasma gondii*)
Trichinosis (*Trichinella spiralis*)
West Nile Virus (WNV)
Yellow Fever
Yersiniosis (*Yersinia enterocolitica or Y. pseudotuberculosis*)

Communicable Diseases Reportable in Massachusetts

Health Care Provider Reporting Timeline

Per *105 CMR 300.000*

REPORT IMMEDIATELY BY PHONE!

This includes both suspect and confirmed cases.

All cases should be reported to your LBOH; if unavailable, call the Massachusetts Department of Public Health (MDPH) at (617) 983-6800 or (888) 658-2850.

Any cluster/outbreak of illness (e.g., foodborne)
Anthrax
Botulism
Brucellosis
Diphtheria
Encephalitis (any case)
Haemophilus influenzae (invasive infection)
Hemolytic Uremic Syndrome
Hepatitis A (acute [IgM+])
Measles
Meningitis (bacterial)
Meningococcal Disease (*N. meningitidis*, invasive)
Plague
Poliomyelitis
Rabies (humans only)
Rubella (congenital and non-congenital)
Severe Acute Respiratory Syndrome (SARS)
Smallpox
Tetanus
Tularemia
Viral hemorrhagic fevers (including Ebola and Marburg)

REPORT PROMPTLY (WITHIN 24 HOURS)

All cases should be reported by mail, phone, or confidential fax to your LBOH.
If unavailable, call the Massachusetts Department of Public Health (MDPH) at (617) 983-6801
Confidential Fax: (617) 983-6813

Amebiasis
Arbovirus infection (including but not limited to dengue, Eastern equine encephalitis, West Nile virus, and yellow fever)
Babesiosis
Campylobacter Enteritis
Chickenpox (Varicella)
Cholera
Cryptococcosis
Cryptosporidiosis
Cyclosporiasis
E. coli O157:H7 infection
Ehrlichiosis
Food Poisonings (includes poisoning by ciguatera, scombrotoxin, mushroom toxin, tetrodotoxin, paralytic shellfish, and amnesic shellfish)

Giardiasis
Glanders
Group A streptococcus, invasive infection
Group B streptococcus, invasive infection
Guillain-Barré Syndrome
Hansen's Disease (Leprosy)
Hantavirus infection
Hepatitis B (acute or chronic)
Hepatitis C (acute)
Hepatitis, infectious, other
Legionellosis
Leptospirosis
Listeriosis
Lyme Disease
Malaria
Melioidosis
Meningitis (viral)
Monkeypox or other orthopox infection in humans
Mumps
Norovirus and other Calicivirus infection
Pertussis (Whooping Cough)
Psittacosis
Q Fever
Reye Syndrome
Rheumatic Fever
Rickettsialpox
Rocky Mountain Spotted Fever
Salmonellosis (including typhoid)
Shiga toxin-producing organisms
Shigellosis
Streptococcus pneumoniae
Toxic Shock Syndrome
Toxoplasmosis
Trichinosis
Typhoid Fever
Typhus
Yersiniosis

REPORT PROMPTLY (WITHIN 24 HOURS)

Report all cases directly to the Massachusetts Department of Public Health (MDPH), Bureau of Communicable Disease Control (BCDC)

Hepatitis C (Chronic): Call (617) 983-6801
HIV/AIDS: Call (617) 983-6560
Sexually Transmitted Diseases: Call (617) 983-6952
- Chancroid
- Chlamydial Infections (genital)
- Genital Warts
- Gonorrhea
- Granuloma Inguinale
- Herpes, Neonatal (onset within 30 days after birth)
- Lymphogranuloma Venereum
- Ophthalmia Neonatorum
  a. Gonococcal
  b. Other Agents
- Pelvic Inflammatory Disease
  a. Gonococcal
  b. Other Agents
- Syphilis

Tuberculosis: Call 1-888-MASSMTB
Rabies Post-Exposure Prophylaxis: Call (617) 983-6800

MDPH, its authorized agents, and local boards of health (LBOH) have the authority to collect pertinent information on all reportable diseases, including those not listed on this listing, related to epidemiological investigations (*M.G.L. c. 111, s.* 7).

Communicable Diseases Reportable in Massachusetts

Laboratory Reporting Timeline

IN ACCORDANCE WITH M.G.L. C. 111D, S. 6., EVIDENCE OF INFECTION* DUE TO THE FOLLOWING ORGANISMS IS REPORTABLE IN MASSACHUSETTS BY ALL LABORATORIES, INCLUDING HOSPITAL LABORATORIES, TO THE MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH (MDPH).

* Evidence of infection includes results from culture methods, specific antigen or genomic tests, histology, other microscopy, and clinically-relevant serologic tests. Infection in Massachusetts residents ascertained out-of-state should also be reported.

REPORT IMMEDIATELY BY PHONE!

This includes both suspect and confirmed cases.

Call the Massachusetts Department of Public Health (MDPH) at (617) 983-6800 or (888) 658-2850 and ask for the Epidemiologist On-Call.

Bacillus anthracis
Brucella sp.
Clostridium botulinum
Clostridium tetani
Corynebacterium diphtheriae
Francisella tularensis
Haemophilus influenzae (from blood, CSF, or other sterile fluid)
Hemorrhagic fever viruses
Hepatitis A virus (IgM+ only)
Neisseria meningitidis (from blood, CSF, or other sterile fluid)
Poliovirus
Rubella virus (IgM+ only)
Rubeolavirus (measles) (IgM+ only)
SARS-associated coronavirus (SARS-CoV)
Vaccinia virus
Variola virus
Yersinia pestis

REPORTABLE WITHIN 24 HOURS

MDPH Confidential Fax: (617) 983-6813

(Note: Arrangements for reporting via fax or electronic data transfer can be made.)

Arboviruses
Babesia sp.
Bordetella pertussis
Borrelia burgdorferi
Burkholderia mallei
Burkholderia pseudomallei
Campylobacter sp.
Chlamydia psittaci
Clostridium perfringens
Coxiella burnetii

Cryptococcus neoformans
Cryptosporidium parvum
Cyclospora cayetanensis
Dengue virus
Ehrlichia canis, E. chaffeensis, E. equi, E. phagocytophila, E. sp.
Entamoeba histolytica
Enteroviruses
Escherichia coli O157:H7 (or other *E. coli*, if found in CSF)
Giardia lamblia
Group A streptococcus (from usually sterile site)
Group B streptococcus (from usually sterile site)
Hantavirus
Hepatitis B virus (HBsAg+, IgM Anti-HBc+)
Hepatitis C virus (EIA+, RIBA+ or PCR+)
Influenza A and B viruses
Legionella sp.
Leptospira sp.
Listeria sp. (from blood, CSF or other sterile fluid)
Monkeypox virus in humans
Mumps virus (IgM+ only)
Mycobacterium leprae
Norovirus & other caliciviruses
Orthopox virus in humans
Plasmodium vivax, P. malariae, P. falciparum, P. ovale
Prion disease, evidence of human disease
Rickettsia akari
Rickettsia prowazekii
Rickettsia rickettsii
Salmonella sp.
Shiga toxin-producing organisms
Shigella sp.
Staphylococcus aureus enterotoxin producing organisms
Streptococcus pneumoniae, from a usually sterile site
Toxoplasma gondii, Toxoplasma sp.
Trichinella spiralis
Varicella (DFA+, viral culture or PCR+)
Vibrio sp.
Yellow Fever Virus
Yersinia sp.

REPORT PROMPTLY (WITHIN 24 HOURS)

Report all cases directly to the Massachusetts Department of Public Health (MDPH), Bureau of Communicable Disease Control (BCDC)

HIV or AIDS: Call (617) 983-6560
(Includes CD4 counts below 200/ml)
Sexually Transmitted Diseases: Call (617) 983-6952
Chlamydia trachomatis (ophthalmic, genital and neonatal infections, lymphogranuloma venereum)
Granuloma inguinale
Haemophilus ducreyi (Chancroid)
Herpes simplex virus, Neonatal Infection (onset within 30 days after birth)
Human papilloma virus (Genital Warts)
Neisseria gonorrhoeae
Treponema pallidum (Syphilis)
***Mycobacterium tuberculosis, M. africanum, M. bovis*: Call 1-888-MASSMTB**

MDPH and its authorized agents have the authority to collect pertinent information related to epidemiological investigations (*M.G.L. c. 111D, s. 6*).

The Commonwealth of Massachusetts
Executive Office of Health and Human Services
Department of Public Health
State Laboratory Institute
305 South Street, Jamaica Plain, MA 02130

BUREAU OF COMMUNICABLE DISEASE CONTROL

MITT ROMNEY
GOVERNOR

KERRY HEALEY
LIEUTENANT GOVERNOR

TIMOTHY R. MURPHY
SECRETARY

PAUL J. COTE, JR.
COMMISSIONER

Date: May 9, 2003

To: Hospitals, Clinics, Health Care Facilities, and Clinical Laboratories

From: Alfred DeMaria, Jr., M.D., Assistant Commissioner, State Epidemiologist
Bureau of Communicable Disease Control

Tracy Miller, J.D., MDPH Privacy Officer

Re: Authorization for Access to Medical Records by Massachusetts Department of Public Health (MDPH) for Purposes of Disease Control and Prevention

Public health reporting mandated or authorized by law is not changed by the rules and regulations promulgated under Health Insurance Portability and Accountability Act of l996 (HIPAA). The HIPAA Privacy Rule specifically allows public health reporting and access to protected health information (PHI) for public health activities without requiring an individual's authorization. The Bureau of Communicable Disease Control is a program of the Massachusetts Department of Public Health (MDPH) and MDPH is a public health authority as defined by the HIPAA Privacy Regulation (*45 CFR §§ 164.501* and *164.512 (b)*). Local boards of health (LBOH) have coordinate authority with the MDPH to access PHI for the public health activities described in this memo. Staff of the Bureau of Communicable Disease Control and LBOH (or authorized agents) are authorized to inspect certain medical records in the course of conducting official public health duties. Employees are bound to protect confidential information obtained during the course of an investigation. (See, *M.G.L. c. 111D, §6* and *105 CMR 300.120*.)

Case investigations frequently require prompt access to confidential medical records for clinical, laboratory, or treatment data. Access by MDPH to hospital, clinic, and laboratory records is specifically authorized under *MGL Chapter 111, §§ 5* and *7*, and *Chapter 111D, §6*. These laws are further clarified by *105 CMR 300.000: Reportable Diseases and Isolation and Quarantine Requirements, sections 300.190 (Surveillance and Control of Diseases Dangerous to the Public Health)* and *300.191 (Access to Medical Records and Other Information)*.

Access to PHI, including medical records, is allowed under the Privacy Rule (*45 CFR 164.512 (b)*). The regulations state that a covered entity is allowed to disclose PHI to a public health authority, without the written authorization of the individual, when it is to be used for the purpose of preventing or controlling disease, injury or disability. Access includes, but is not limited to,

the conduct of public health surveillance, public health investigations, and public health interventions. Please note that while covered entities are required to account for disclosures made to a public health authority, routine reporting conducted on an on-going basis to public health authorities need not be logged in individual medical records and may consist of a summary statement as to the nature of such reporting (*45 CFR § 164.528 (b)(3)*).

MDPH will specify the minimum information necessary to conduct public health investigations, and providers may reasonably rely on a public health official's determination that the information requested is the minimum necessary data for this purpose.

Any questions concerning specific situations may be directed to the MDPH Division of Epidemiology and Immunization Surveillance Program at (617) 983-6801. Thank you for your cooperation and assistance in our efforts to prevent and reduce morbidity and mortality in Massachusetts.